

# EXHIBIT K

FINAL DETERMINATION OF THE ADMINISTRATOR  
CONCERNING M. A. NORDEN SITE PURSUANT TO SECTION 404(c)  
OF THE CLEAN WATER ACT

I. INTRODUCTION

Under Section 404(c) of the Clean Water Act (CWA), the Administrator of the Environmental Protection Agency (EPA) is authorized to prohibit the specification (including the withdrawal of specification) of any defined area as a disposal site, and he is authorized to deny or restrict the use of any defined area for specification (including the withdrawal of specification) as a disposal site, whenever he determines, after notice and opportunity for public hearings, that the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas. Before making such a determination, the Administrator shall consult with the Chief of Engineers, the landowner, and the applicant, if any.

The M. A. Norden Company, Inc. has proposed to fill 25 acres of wetlands in Mobile, Alabama, for the purpose of building a waste recycling and storage facility. After consideration of the record in this case, which includes public comments, the public hearing record, a Special Task Force Report, and comments from the Office of the Chief of Engineers, and after consultation <sup>1/</sup> with the M. A. Norden Company's representatives, I have determined that the discharge of the fill materials into the site proposed by the M. A. Norden Company ("the Norden site") will have an unacceptable adverse effect on shellfish beds and fishery areas and wildlife areas. Therefore, I am hereby exercising my authority to prohibit the use of the area in question for specification as a disposal site, as described more fully below. My findings and reasons are also set out below.

II. BACKGROUND AND HISTORY

Under Section 404 of the CWA (33 U.S.C. 1251 et seq), any person who wishes to discharge dredged or fill material into the waters of the United States, including wetlands, must first obtain a permit from the Secretary of the Army, acting through the Chief of Engineers. In August, 1980 Mr. Norden applied to the Mobile District Corps of Engineers

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<sup>1/</sup> At my request, the Assistant Administrator for External Affairs, Josephine S. Cooper, acted as my representative at this meeting.

for a Section 404 permit (Mobile District File No. AL 80-00327-C) to fill 65 acres of wetlands for a recycling facility.

During the permit evaluation period, review agencies, including EPA, the U.S. Fish and Wildlife Service (FWS), and the National Marine Fisheries Service (NMFS), objected to issuance of a permit to fill wetlands on the 65 acre parcel. The grounds for these objections were the applicant's apparent failure to adequately consider less environmentally damaging alternatives, the potential loss of functioning wetlands in an area where the cumulative loss of wetlands has been significant, the anticipated adverse effects on fish and wildlife, the loss of water filtration benefits, the loss of stormwater storage capacity, and the belief that these impacts are avoidable because the proposed activity does not need to be located in or next to waters of the United States (i.e., it is not water dependent). EPA also expressed its view that the project did not comply with the Section 404(b)(1) Guidelines (40 CFR Part 230).

On April 21, 1982, Mr. Norden modified his application by reducing the proposed fill area to 25 acres of wetlands. As revised, the proposed project calls for the deposition of 228,000 cubic yards of demolition materials and/or sand in order to fill 25 acres of wetlands to create developable uplands. On this filled site, Mr. Norden plans to construct a fiber recycling facility consisting of offices, warehousing, and storage yard space. He presently operates this type of business on leased property and anticipates losing that lease option. The proposed business requires proximity to rail and truck routes for access to raw materials and distribution to markets.

On June 3, 1982, EPA commented to the Mobile District on the revised proposal, expressing the view that it still did not comply with the Section 404(b)(1) Guidelines and that no ecological justification had been found to alter the previously stated EPA position against permit issuance. After performing their Section 404(b)(1) evaluation and public interest review, the Mobile District agreed with EPA's recommendations. In March, 1983 the District determined that the destruction of 25 acres of productive wetlands for a non-water dependent use was unwarranted, and concluded that the permit should be denied. However, the Governor of Alabama wrote to the Corps expressing an interest in the Corps' giving favorable consideration to Mr. Norden's permit request. Since the District's tentative decision to deny the permit was contrary to the Governor's request, the application was referred to the Corps' South Atlantic Division (SAD) for decision, in accordance with Corps' regulations.

On August 3, 1983, Colonel James B. Hall, Acting Division Engineer of the SAD, wrote to EPA advising that he intended to direct the Mobile District Engineer to issue the permit for the discharge of 228,000 cubic yards of sand or demolition materials in the 25 acres of wetlands, as previously described.

Under the Section 404(q) Memorandum of Agreement between EPA and the Department of the Army, EPA wrote to Mr. William R. Gianelli, Assistant Secretary of the Army (Civil Works) on August 30, 1983, describing in detail why EPA believed that this proposal failed to comply with the Section 404(b)(1) Guidelines and requesting a review of the SAD's decision. On September 22, 1983, Mr. Gianelli declined referral of the application, having concluded that EPA's objections constituted a technical disagreement between the SAD and EPA, not an issue of national importance. He stated that he was aware that EPA had the Section 404(c) procedures available to more appropriately address the technical disagreements between EPA and the SAD. On September 30, 1983, EPA notified the Mobile District Engineer of EPA's intent to invoke Section 404(c) procedures to prohibit the specification of the Norden site as a disposal site, in compliance with the 404(c) regulations.

On October 28, 1983, EPA's Regional Administrator for Region IV, Charles Jeter, met with representatives of Mr. Norden and the SAD to give the applicant and the Corps an opportunity to demonstrate that no unacceptable adverse effects would result from the proposed action or to modify the proposal in such a way as to avoid the unacceptable adverse effects. Although a mitigation plan was proposed by the applicant at the meeting, it was inadequate to meet the Region's concerns. Therefore, on November 10, 1983, the Regional Administrator published a proposed determination in the Federal Register to prohibit, deny or restrict the specification, or the use for specification, of the site for the disposal or discharge of dredged and/or fill materials. A public hearing on this proposed determination was held in Mobile, Alabama on December 15, 1983. Comments supporting EPA's proposed determination were received from Federal resource agencies (i.e., FWS and NMFS), conservation groups, the County Extension Service, the Three Mile Creek Association, and private individuals. However, the overwhelming majority of the written comments, as well as the presentations at the hearing, were from those in support of the proposal, especially people who would benefit by the jobs it would engender.

After the close of the comment period, the Regional Administrator submitted to the Administrator a recommended determination to prohibit specification of the proposed site for the discharge of 228,000 cubic yards of demolition materials and sand as proposed by Mr. Norden. In addition, Mr. Jeter contended that the alternative sites considered by Mr. Norden and the SAD were very limited and failed to thoroughly consider upland sites not presently owned by Mr. Norden. However, he also expressed his concern about the economic problems and high unemployment in the area near the proposed site. Therefore, in his transmittal letter to the Administrator, the Regional Administrator suggested that an effort be initiated with State and local communities to assist Mr. Norden in identifying alternative sites. The recommended determination was received at EPA Headquarters on January 16, 1984.

By letters of February 9, 1984, EPA Headquarters initiated the opportunity for consultation with the Chief of Engineers and the applicant, in compliance with the 404(c) regulations. Mr. Norden's Washington representative, Mr. Charles Mott, met with the Assistant Administrator for External Affairs to discuss the case on February 29, 1984. One result of that meeting was an agreement to form a Special Task Force composed of Federal, State and local representatives to examine the feasibility of using alternative sites to the one proposed.<sup>2/</sup> The Special Task Force was formed, site criteria were developed in consultation with the applicant, and a consultant was hired to staff the Special Task Force. The Special Task Force's Final Report, dated April 18, 1984, was transmitted to EPA Headquarters and to the applicant on that day. This report was added to the administrative record previously transmitted to EPA Headquarters by the Regional Administrator and was considered by the Administrator in making his final determination, as explained in Section V below. Because of the Special Task Force effort, and the Administrator's request for additional information, the date by which the Administrator had to make a final determination has been extended four times, ultimately to July 31, 1984.

### III. DESCRIPTION OF THE SITE

The 25-acre wetland area involved in this permit application is part of a larger fresh water forested wetland complex that occurs along Three Mile Creek, a tributary of the Mobile River (see attached section of the U.S. Geological Survey's Mobile, Alabama 7.5 minute quadrangle map, 1953). The site is tidally influenced via One Mile Creek, a man-made canal on the southwest side of the site that was apparently once a natural tributary to Three Mile Creek. The site is bordered on the northeast by Conception Street. A defunct railroad spur bisects the southeastern end of the property. A sanitary landfill occurs immediately southwest of One Mile Creek and the lower end of Three Mile Creek is heavily industrialized. Most of the Three Mile Creek watershed is in residential development. The wetlands that are still present along Three Mile Creek primarily occur in the lower, tidally influenced section.

The proposed fill site, as well as some adjacent wetland, was at one time in the past (i.e., sometime in the mid-1970's) designated by the Corps as a dredged material disposal site for a Mobile Harbor maintenance dredging project.

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<sup>2/</sup> By letters dated January 31, 1984 and February 29, 1984, Mr. Mott indicated that the Norden Company saw no point in the formation of the Special Task Force to examine alternatives, but that they had no objections to its formation. It was subsequently clarified that, although the Norden Company did not want to participate on the Special Task Force, they would cooperate and suggest ground rules and criteria

At the time, EPA reluctantly concurred with this designation based upon the project's water dependency and the overall public interest considerations associated with maintaining the navigability of the Mobile River ship channel.<sup>3/</sup> Although dredged material was placed only immediately adjacent to Three Mile Creek at its confluence with One Mile Creek, trees were removed from a larger area, including some of the proposed fill site, preparatory to spoil disposal. (The full use of the site for dredged spoil disposal has been abandoned.) As a result, the site has become vegetatively more diverse and today could best be described as a forested swamp/shrub swamp/marsh wetland complex.

#### IV. ECOLOGICAL VALUES ASSOCIATED WITH THE SITE

The record, including biological and hydrological studies of the site conducted by EPA's technical staff and FWS personnel, shows that the project site is a productive wetland, typical of the area, that contributes organic material to the fish and shellfish communities of the Mobile Bay estuary, provides valuable habitat for wildlife, and acts as a pollutant filtering mechanism which helps to reduce degradation of water quality in the adjacent open water system.<sup>4/</sup> These functions are elaborated upon below.

##### A. Contribution to the Mobile Bay Estuary

Field investigations show that the Norden site is characterized as a highly diverse and productive vegetative community typical of fresh water marshes, shrub swamps and forested swamps in the Gulf Coastal region. The amount of plant biomass measured at two plots within the marsh was consistent with literature values for similar productive fresh water plant associations. For example, sampling produced mean standing crop values of 542 g/m<sup>2</sup> for one sample area dominated by common arrowhead and 345 g/m<sup>2</sup> for a less homogeneous sample area dominated by smartweed. Both values can be considered conservative since they did not include biomass

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<sup>3/</sup> In addition, EPA's Section 404(b)(1) Guidelines were not yet published. These Guidelines, which were published in interim final form on September 5, 1975 and in final form on December 24, 1980, provide strict criteria for evaluating the environmental impacts of the projects affecting the waters of the United States, including wetlands. The 404(c) regulations were not published until October 9, 1979.

<sup>4/</sup> Despite the significance of the Norden site to downstream fish and shellfish resources in the Mobile estuary, the record does not indicate that the immediate site is itself of significant habitat value to fish or shellfish. This is undoubtedly due to the highly polluted nature of Three Mile and One Mile Creeks.



contributions from the intermediate canopy (i.e., litter fall). This plant biomass is significant because it serves not only as food for many of the animals that live on the wetland site (i.e., various herbivores that graze the vegetation), but also as a source of important detritus (i.e., partially decayed plant fragments) for downstream estuarine food webs, leading eventually to commercial fish and shellfish resources.

Although the project area wetland is fringed by urban areas, its role in, and contribution to, the Mobile Bay estuarine complex remains viable. Organic nitrogen and total organic carbon concentrations in the marsh water column were measured by EPA personnel and found to be orders of magnitude greater than that in One Mile and Three Mile Creeks. This indicates that plant biomass (detritus) produced at the project site is being converted to nutrient concentrations in the water column. The fact that this detritus is utilized as a food source at the site is evidenced by the presence of an aquatic macroinvertebrate community dominated by detritus eaters. Although utilization of this material begins at this point, the most notable aspect of utilization of nutrients produced and exported from the project marsh is the rapidity with which the material can be transported to Mobile Bay proper. Hydrological data collected by EPA showed that ground and water surface elevations were flooded by at least 45% of the high tides in the area. Dye tracer studies confirm that tidally driven water inundating the project site reaches the Mobile River in 21 hours and Mobile Bay in 69 hours. Thus, it appears that substantial detritus from this wetland site reaches the Mobile River and Bay.

Utilization of such detrital material in Mobile Bay, in conjunction with the contribution from many other sources not originating within the Bay, is evident through the highly important status of the Bay's fishery resources. Detrital material is eaten by animals such as shrimp, crabs, oysters, clams, and juvenile and larval stages of several species of fish, including menhaden, spotted sea trout, sheepshead, and Atlantic croaker. It is also utilized by free-floating crustaceans (copepods, etc.), which are important food for juveniles of most fish species. These species are present in Mobile Bay. The importance of the fishery in Mobile Bay, as well as the role of wetlands as a source of nutrients in estuarine food web dynamics, is well recognized and is substantiated by the multi-million dollar annual commercial and sports fish landings in the Bay. It has been estimated that as much as 93 percent of the fish landings in the two Alabama coastal counties are of estuarine dependent species. (Estuarine dependent species are not limited to those which spend their entire lives in these highly productive areas. Some may require the estuary as a spawning area, some for nursery, and others for feeding purposes only.)

## B. Wildlife Values

The FWS wildlife habitat surveys showed that the interspersed of trees, shrubs, and low-growing emergent vegetation and pockets of shallow water provide excellent habitat conditions for many species of resident and migratory wildlife. Bird populations on the project site are highly diversified, as demonstrated by the FWS's limited observation of 44 species in the immediate project vicinity. The listing includes numerous waterfowl and songbirds which utilize the area for feeding and/or reproduction. The FWS concluded that the area experiences high rates of use by hawks during spring and fall migration. Wading birds are well represented on the project site by great egrets, snowy egrets, cattle egrets, and green-backed herons.

The site provides moderate to excellent habitat for swamp rabbits, nutria, muskrat, and raccoons. According to the FWS, moderate to high populations of reptiles and amphibians inhabit the project area. The endangered American alligator has been observed in and on the banks of Three Mile Creek.

After their field review of the wildlife resources at the site, the FWS concluded that the wetlands in question are viable and an integral part of the Three Mile Creek ecosystem.

As part of their analysis of the wildlife values of the proposed site, the FWS also conducted a Habitat Evaluation Procedures (HEP) analysis. The HEP is based on the assumption that vegetative communities have value to wildlife and that positive or negative impacts can be expressed in terms of the quantity and quality of modifications to wildlife habitat. These impacts can be measured and compared. Additionally, optimum habitat for a certain species can be characterized and any habitat can be compared to the optimum to develop a Habitat Suitability Index (HSI).

Habitat suitability can be related to the abundance of a species because of the assumed linear relationship between the HSI and the carrying capacity of a habitat. The HSI for a particular species is determined by utilizing models containing measurable key habitat components for a specific animal in a particular habitat. An HSI of 0 indicates that a cover type (i.e., the vegetation type) provides little or no potential habitat for the evaluation species, while a value of 1.0 indicates that the habitat provides optimum life requisites in the form of food, cover, and reproduction. A value between 0 and 1.0 can be correlated to various levels of carrying capacity in a linear manner (i.e., the difference between 0.1 and 0.2 is of the same magnitude as the difference between 0.8 and 0.9). The HSI is an expression of habitat quality per acre per year and total Habitat Units (HU) can be obtained by multiplying the HSI by the total number of acres of habitat available. The impact of proposed land use changes can be determined by comparing the HU values for the future without the project with the expected HU values for the future with the project. Thus, the HEP provides a means to quantitatively evaluate project effects on wildlife habitat and its productivity over time.



Nine species were selected by the FWS for their HEP evaluation in the study area: the yellow warbler, raccoon, barred owl, woodcock, wood duck, muskrat, green-backed heron, hairy woodpecker, and swamp rabbit. A broad range of species was selected to cover the various ecological functions of the habitat. Consideration was also given to the species' recreational, commercial, and aesthetic value. The FWS's list of Species of Special Emphasis (SSE) was also used in determining the final array of species to be evaluated at this site. The SSE is a list of species the FWS has determined to be of national importance (Federal Register, Vol. 48, No. 237, December 8, 1983). Species on this list which were used for this analysis include the wood duck, the green-backed heron (representing a group of wading birds) and the yellow warbler (representing the songbird group). Models developed for these species by the FWS's Habitat Evaluation Procedures Group, Western Energy and Land Use Team were used. The HSI for each of the nine species at the proposed site is as follows: yellow warbler (0.83), raccoon (0.55), barred owl (0.59), woodcock (1.0), wood duck (0.9), muskrat (0.63), green-backed heron (0.94), hairy woodpecker (0.73), and rabbit (1.0). The average HSI for the site based upon the nine species is 0.80. Thus, based upon the key species selected, the site was found to be valuable for wildlife habitat (i.e., there was an overall high suitability index).

#### C. Pollution Filtering

Water quality conditions in One Mile Creek and Three Mile Creek are degraded due to the stormwater runoff from industrial and residential development and discharges of inadequately treated wastewater from the nearby Three Mile Creek municipal treatment plant. EPA data for this site demonstrate that the subject wetland acts as a filter and is absorbing and storing heavy metals and pesticides, and that waste nutrients in overflow water and runoff water from adjacent developed areas are being converted in the wetland to desirable detrital materials.

#### D. Other Information Addressing Fish, Shellfish and Wildlife Resources

The only other substantive technical information in the record that addresses the value of the site to fish, shellfish, and wildlife resources

is found in the various Corps' documents.<sup>5/</sup> The Acting South Atlantic Division Engineer Colonel James B. Hall, for example, when he wrote to the Regional Administrator on August 3, 1983 indicating his intent to authorize issuance of the permit, enclosed an environmental assessment. This assessment indicates that "The Three Mile Creek system serves as a feeding and nursery area for euryhaline fishes and shell fishes from the Mobile Delta system. The freshwater swamp adjacent to the creek provides fish and wildlife habitat, exports organic detritus, acts as a natural water filter and runoff buffer and affords groundwater exchange." It further acknowledges that Mr. Norden's proposal would result in "... decreasing the wildlife carrying capacity of the system and possibly affecting fish and wildlife species which feed and nurse in the Three Mile Creek drainage system by decreasing available organic detritus exports," but goes on to say "... since aquatic resources, such as fish, are limited in diversity and abundance due to the poor water quality and wildlife in the area are adapted to urbanized conditions, impacts are expected to be minor." The assessment also indicates that impacts resulting from the loss of this 25 acres of wetland habitat could be alleviated by various mitigation measures described in the assessment. The SAD Section 404(b)(1) Guidelines compliance analysis comes to similar conclusions. It additionally states that the "Elimination of 25 acres of hardwood swamp will result in the loss or change of breeding or nesting areas, escape cover, travel corridors and preferred food sources for resident and transient wildlife species associated with the aquatic ecosystem."

In analyzing the South Atlantic Division's environmental assessment and Section 404(b)(1) Guidelines compliance analysis, it is apparent that nothing technical therein contradicts the EPA data which demonstrate the significance of the plant biomass produced at the site to the shellfish and fishery resources of the Mobile River and Bay. The Division assessment appears to concentrate on the fishery resources of Three Mile Creek, an area

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<sup>5/</sup> The record also contains some proposed environmental support documents (specifically an environmental assessment and a Section 404(b)(1) Guidelines compliance analysis) which were sent by the District Engineer, Colonel Patrick J. Kelly, to the South Atlantic Division Engineer, Brigadier General Forrest T. Gay III, when Colonel Kelly recommended to General Gay that the Norden project be denied. Because these do not represent the official Corps' environmental documents, I did not consider them in developing my final determination. In addition, various local residents contended at the hearing that the site does not support much wildlife based upon their experience with it. However, these non-technical observations do not appear to be substantiated by the technical investigations of EPA, FWS, and the Corps.

apparently not considered of high value to fish or shellfish by EPA Region IV due to its poor water quality. In his comments for the hearing record, the South Atlantic Division Engineer did contend that "It is unreasonable to assume that the detrital export from the proposed 25 acre project area would be detectable, measurable, or significant to the shellfish beds, in view of the vast quantities of detrital material exported from the marshes and swamps in the Mobile Delta." However, EPA's studies elaborated upon above (Section IV.A.) demonstrate that significant detrital export from the site is occurring. The relation of that detrital export to other sources is discussed below (Section VI). As for wildlife, the SAD's position on the significance of the proposed fill site to wildlife directly conflicts with that of the FWS. In my judgment, the FWS field investigations and HEP analysis, made part of the administrative record, are more probative and clearly substantiate the significance of the site to wildlife.

## V. ALTERNATIVES TO THE PROPOSED ACTION

In evaluating what is an unacceptable adverse effect, the 404(c) regulations indicate that the Administrator should give consideration to relevant portions of the Section 404(b)(1) Guidelines. Therefore, those portions of the Guidelines relating to, among other things, alternative sites may be considered in evaluating the unacceptability of the environmental impacts. For example, if alternative sites are available, so that the wetland loss is an avoidable consequence of undertaking the project, I may take that into account in assessing the unacceptability of the loss.

Substantial debate has occurred on the subject of "alternatives" in the course of the permit proceeding and the 404(c) proceedings so far. Although the Regional Administrator in his recommended determination concluded that alternative sites were probably available, he noted Mr. Norden's contrary contention and suggested initiation of an effort to assist Mr. Norden in identifying alternative sites in light of the obvious local interest expressed at the public hearing over the job opportunities that would be spurred by this project. As indicated in Section II, when this matter reached Headquarters a Special Task Force was ultimately commissioned to address the issue of alternatives, both to ensure as sound a record as possible for the 404(c) decision and to minimize the chance of foregone job opportunities. A summary of the Special Task Force Final Report (April 18, 1984) is given below. 6/

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6/ In a May 3, 1984 letter, the Norden Company responded unfavorably to the Special Task Force Final Report. I have considered their response in developing this final determination, as explained below.

The Special Task Force Final Report (Final Report), prepared by a consultant, evaluated all factors, including purchase price, improvements and environmental mitigation, and concluded that alternatives to the proposed project site are available in the study area.

Using the criteria suggested by the Norden Company, which were expanded by the Special Task Force, seven alternative sites were selected from a list of forty sites initially identified. An eighth site, the Norden site, was also considered. All sites meet zoning criteria for this project. Seven sites, including the Norden site, have utilities available. One site is not served by sewers; it would require the installation of a septic tank or other on-site system. Each of the seven alternative sites is available from a single willing seller; however, one site contains extensive improvements (i.e., office/warehouse space) which may exceed Mr. Norden's needs. Five sites, including the Norden site, meet the size criteria. Three sites either could not be subdivided to obtain exactly 25 acres or would require the assemblage of two or more contiguous sites. Four sites are located in or adjacent to the target labor force. Of the other four sites which are not so located, only two, including the Norden site, have public transportation available.

Although most sites will require some de-mucking and backfilling, no alternative sites were considered as candidates for Mr. Norden's project if they required permitting or other major environmental approvals. All sites, including the Norden site, had some deficiencies related to infrastructure which could be corrected at a cost.

Three major cost factors (i.e., filling/compaction, foundation, and mitigation) are involved in developing the Norden site. <sup>7/</sup> According to the Final Report, these costs could range between \$1.8 million and

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7/ In relation to mitigation, the Corps' draft permit proposed, among other things, that about four acres of previously filled area near the Norden site and owned by Mr. Norden be regraded and converted to wetlands, and that a stormwater retention plan be implemented for the Norden site. The FWS, on the other hand, concluded, among other things, that 30 acres of new wetlands would need to be created to mitigate the loss of the 25 acres of wetlands to be destroyed at the Norden site. The Special Task Force estimated that the Corps' and FWS proposals would cost \$90,000 and \$860,000, respectively. Although the Special Task Force did not endorse either of these mitigation proposals, it felt that the precedent for mitigation was so strong and the cost so significant, that mitigation could not be omitted as a cost comparison. As explained below, I have not included the cost of the FWS mitigation in my evaluation of alternatives.

\$3.3 million depending on the availability of inexpensive fill material. The Final Report also indicated that the minimum estimated cost of developing the Norden site is generally comparable with the minimum cost of purchasing and developing alternative sites and that the maximum estimated cost of developing the Norden site is somewhat higher than most other sites.

The Final Report concluded that:

1. There are alternative sites available which meet the criteria that were established. While this brief study was not intended to be an exhaustive analysis, it has identified a number of sites which meet, or could be made to meet, the screening criteria.
2. Some of the identified sites could be developed at a cost approximating the cost of developing the Norden site.

I concur with the ultimate conclusion of the Final Report that practicable alternative sites are available, based upon their study approach.

Mr. Mott, in a letter of May 3, 1984 challenged a number of aspects of the Final Report. While the timing of the presentation of the information in Mr. Mott's letter has been less than optimal for our alternatives siting study, I have nevertheless considered these comments in my decision. I have also taken into consideration the fact that, although the Special Task Force originally endorsed the Final Report, four members of the Special Task Force (representing a majority of organizations comprising the Special Task Force) rejected the conclusions of that report by letter of May 10, 1984, apparently based on the contentions in Mr. Mott's letter.

Mr. Mott's letter raises issues in five major categories. Following is a description of those categories and my reaction to each of them:

1. Mitigation Cost. Mr. Mott commented that inclusion of the cost of the FWS mitigation plan in the cost analysis in the Final Report was inappropriate because it is questionable whether the Corps would require the FWS mitigation in this case (i.e., the proposed permit did not require any plan resembling it as a condition of issuing the permit and developing the proposed site). I believe the question raised in this regard by Mr. Mott is reasonable. This is not to say that I disagree with the importance of mitigation or the FWS mitigation proposal as such. It is simply acknowledging the fact

that the 404 permitting authority, in this case the Mobile District Corps of Engineers, proposed to require much less extensive mitigation than that in the FWS mitigation plan, and therefore it is appropriate for me to consider cost comparisons without this mitigation. Without the cost of the FWS mitigation plan, the Final Report estimate for the Norden site would have a cost range of \$1.8 million to \$2.5 million. Accepting this narrower cost range does not affect the minimum project cost comparisons in the Final Report; there are five sites with minimum project cost estimates lower than that in the Norden site. It does, however, affect the maximum project cost comparisons significantly. Instead of having five alternatives that have lower maximum costs than the Norden site, only one alternative has a lower maximum cost, although three others are essentially comparable. Consequently, I conclude that, even without adding the cost of the FWS mitigation plan to the cost of the Norden site, there are practicable alternative sites for location of Mr. Norden's facility.

2. Location Near the Labor Force. Mr. Mott's letter criticized the inclusion of alternative sites that are more than five miles from the Alabama State Docks, expressing concern that the distance to work is excessive for the labor market proximate to the wetlands site. The jobs issue is a major concern in this case, and was a key reason for formation of the Special Task Force. The five mile criterion was adopted by the Special Task Force, not as a mandatory requirement, but as a guideline to focus the site identification process. When available sites were identified beyond the five mile radius which had significant advantages under other siting criteria, they were included as candidate sites. The unemployment problem, as was clearly brought out at the public hearing, is widespread throughout the Mobile area. The review of candidate sites in the Final Report could not guarantee that the labor force for practicable alternatives will consist of the same individuals living near the Norden site. Instead, the Final Report considered, and weighed heavily in arriving at its conclusions, the proximity to labor markets with characteristics like that in the vicinity of the wetlands site (largely unskilled and low or minimum wage level). I believe the Final Report reflects very careful consideration of this issue, and I endorse the manner in which it was handled.
3. Costing Analysis. Mr. Mott's letter contains cost estimates that differ substantially from those of the Final Report. He challenges the estimated cost of fill and the lack of consideration of interest cost of land acquisition capital. It is clear that the Special Task Force did not have available



to it all information available to Mr. Mott. However, I do not believe that such detailed analysis specific to the Norden Company was necessary. I also note that Mr. Mott included no mitigation cost in his analysis, even though the proposed Corps' permit would have required some mitigation.

I find the Final Report cost projections to be sound. In estimating the cost of fill, the Final Report not only considered sources of fill, including the availability of pre-fill, but also the cost of transportation and compacting. In estimating all cost projections, the Final Report used a consistent and acceptable approach of capital cost without interest cost, which allows for a fair basis of comparison. Without access to detailed internal financial records, the costing was done as accurately as possible, based on reasonable costs and practices. Therefore, I accept the cost comparison of the Final Report, as qualified by the discussion of the FWS mitigation plan cost.

4. Task Force Procedures. Mr. Mott objects to Special Task Force procedures. I find that the Special Task Force procedures were reasonable, given the very pressing time frame requirements, which EPA agreed to at the applicant's request. The Special Task Force agreed to the procedures, including the adoption of the final report by consensus, which took place at the April 13, 1984 Special Task Force meeting. Dissenting opinions were recorded in the minutes of the Special Task Force meetings.
5. Environmental Criteria. Mr. Mott's letter objected to the inclusion of environmental criteria in accessing alternative sites. This was included because the Special Task Force wished to consider only those sites which would not encounter problems in obtaining any required environmental approval. I find this to be a sound criterion for the Special Task Force to use.

In summary, after consideration of the issues raised by Mr. Mott's letter and the May 10, 1984 letter from former Special Task Force participants, I have determined that the conclusions in the Final Report are sound, and accept those conclusions as part of the basis for my decision.

## VI. UNACCEPTABLE ADVERSE EFFECTS

Of the statutory criteria mentioned in Section I that the Administrator can consider in determining whether a proposed discharge of dredged or fill material will have an unacceptable adverse effect upon the waters of the United States, I find that shellfish beds, fishery areas and wildlife areas are applicable to the Norden case.

As shown in Section IV, the wildlife values of the Norden site are high. The site represents a diverse habitat which is an integral part of the Three Mile Creek ecosystem. It provides moderate to excellent habitat for small mammals (e.g., swamp rabbits, nutria, muskrat, and raccoon), birds (particularly songbirds, wading birds and hawks), and various reptiles (including the endangered American alligator) and amphibians. This wildlife habitat value is amply reflected in the high overall HSI determined for the site by the FWS based on their HEP analysis. The proposed filling would result in the direct and irretrievable loss of this habitat and the death or displacement of the animals that utilize it. Those displaced will move to similar wetland habitat in the area where they will compete for resources (e.g., food and space) with others of their kind. Because these adjacent areas already have animal populations, the net result will likely be overall lower animal populations over time. (As shown below, there has already been substantial cumulative loss of this type of habitat along Three Mile Creek with resultant loss and displacement of animal populations.) I consider the loss of this 25 acres of ecologically valuable habitat to be an unacceptable adverse effect that will be detrimental to wildlife populations in the area.

The value of the Norden site to the downstream fisheries and shellfisheries in Mobile River and Mobile Bay was also elaborated upon in Section IV. The amount of plant biomass produced at the site is comparable to other similar wetlands in the area and much of it is exported downstream via tides to the Mobile River and Mobile Bay in the form of nutrient-enriched detritus. This detritus is considered significant to the fish and shellfish of Mobile River and Mobile Bay, either directly or indirectly, as a food source. Because of the decrease in the production and export of plant biomass (i.e., detritus) that will result from filling this 25 acres wetland site and the importance of such detritus to the estuarine food webs, this project will have significant impacts on fish and shellfishery resources of the Mobile River and Mobile Bay. In addition, because the Norden site currently functions in pollution filtering (e.g., heavy metals, pesticides, inorganic nutrients, organic wastes), its destruction by filling will result in more pollutants flowing beyond Three Mile Creek to the Mobile River and Mobile Bay with likely adverse impacts on shellfish and fishery resources there.

These wetland losses and the resultant impacts on fish, shellfish, and wildlife are considered even more significant when considered in a cumulative context. Historically, wetlands in the Mobile Delta are reported to have decreased by 3,946 acres (22%) as a result of dredging and spoil disposal. Other estimates show that approximately 1,651 acres have been filled in the Mobile Harbor alone. Although not all filled areas were wetlands, wetlands probably comprised a substantial portion of the lost area. In addition, a recent study by the FWS of the U.S. Geological Survey's Mobile, Alabama 7.5 minute quadrangle map (covering the Mobile area) indicates that wetlands have suffered substantial losses since 1956 amounting to 3,546 acres. Most of the forested wetlands and fresh marsh losses since 1956 occurred along Three Mile Creek. This cumulative loss is also obvious on high altitude aerial photographs of Three Mile Creek (e.g., Hickory Street Sanitary Landfill). This incremental loss of wetlands imposes substantial harm to the wildlife, fish and shellfish resources of the Mobile Estuary, and makes the loss from filling the instant site unacceptable.

EPA's Section 404(b)(1) Guidelines indicate that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. As indicated in Section V, the 404(c) regulations indicate that I should give consideration to relevant portions of the Section 404(b)(1) Guidelines in evaluating what is an unacceptable adverse effect. I have considered the availability of practicable alternatives based upon the information in the record, including the Special Task Force Final Report on alternatives, and conclude that less environmentally damaging alternatives to the Norden proposal are available and that said alternatives are practicable taking into consideration costs, technology and logistics. This conclusion reinforces my conclusion that the adverse impacts on shellfish beds and fishery areas and wildlife areas, if the site in question were to be filled, are unacceptable.

#### VII. PROHIBITION ON USE OF THE M.A. NORDEN SITE FOR SPECIFICATION AS A DISPOSAL SITE

Section 404(c) authorizes several degrees of limitation on discharge of dredged or fill material at a disposal site. Where the facts warrant it, I may prohibit all future discharges of all dredged or fill material at a site, whether or not the site has previously been specified in a 404 permit. If there is already a permit, my action would be a "withdrawal of specification"; if no permit has been issued, my action would be a "prohibition of specification." On the other hand, where some materials will have significantly less damaging effects than others, or where limiting discharges to particular places or to a particular manner will lessen the likelihood of unacceptable adverse effects, I may simply "restrict," or condition, the use of the site for specification.

In the present situation, after consideration of the record in this case, including public comments, the hearing record, the Special Task Force Final Report, comments from the Chief of Engineers, and after consultation with the applicant, I have determined that unacceptable adverse effects will occur on shellfish beds and fishery areas and wildlife areas as a result of this project. Because there is nothing in the record that indicates that certain parts of the Norden site are less important than others to fish, shellfish or wildlife, and because the adverse impacts could not be eliminated by restricting disposal to clean fill, I do not consider a mere restriction on the use of the site to be appropriate. Therefore, I am hereby exercising my authority to prohibit the use of the 25 acre area in question for specification as a disposal site.

  
ADMINISTRATOR  
U.S. ENVIRONMENTAL PROTECTION AGENCY

JUN 15 1984  
DATE

